The Evaluation of Discriminatory Power of ERIC-PCR for Molecular Typing of Salmonella enteritidis Strains Isolated in Tehran, Iran

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Background & Objectives: *Salmonella spp*. is considered as one of the bacterial pathogens implicated in travelers' diarrhea. The aim of the present study was to determine the molecular subtypes of *Salmonella enteritidis* strains by ERIC-PCR.

Methods: Over a two years study period from 2006 to 2008, Salmonella isolates recovered from patients admitted in several hospitals in Tehran were included in the study. The Salmonella isolates had been identified by the conventional microbiological Methods and serotyped by slide agglutination with commercial mono and polyvalent antisera and then finally, molecular typing of strains and genetic relationships between them were determined using ERIC-PCR.

Results: ERIC-PCR produced 6 to 17 DNA bands, with sizes ranging from 200 to 3200 bp. In total, ERIC-PCR differentiated all *Salmonella enterica* serotype enteritidis isolates into 9 distinct clusters (E1-E9) and majority of the strains (35%) belonged to cluster E1.

Conclusion: The results of this study showed the endemic *Salmonella enteritidis* strains isolated in Tehran could be attributed to diverse ERIC clusters. We also concluded that ERIC-PCR has shown good discriminatory power for typing of *Salmonella enteritidis*.

Keywords: *Salmonella enteritidis*; ERIC-PCR; Genotyping